

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants : David Wayne Daniels et al Conf. No 8039  
Serial No. : 10/606,304 Art Unit: 3733  
Filed : June 25, 2003 Examiner: Hoffman, Mary C.  
For : NON-LINEAR REAMER FOR BONE PREPARATION AND  
ASSOCIATED METHOD

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Commissioner for Patents  
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**AMENDMENT**

Dear Sir:

In response to the Official Action dated July 24, 2006, please amend the above-identified application as follows:

**Amendments to the Drawings** begin on page 2 of this paper.

**Amendments to the Claims** are reflected in the listing of claims, which begins on page 3 of this paper.

**Remarks/Arguments** begin on page 8 of this paper.

### **Amendments to the Drawings**

The attached sheets include formal drawings for FIGS. 1-44. No new matter has been added.

### **Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

### **Listing Of Claims**

We claim:

1. (Currently amended) A reamer for preparing a cavity in the intramedullary canal of a long bone, said reamer comprising:

a first component for preparation of the cavity in the canal, said first component including a portion thereof for placement at least partially in the cavity of the long bone, said first component defining a rotational centerline thereof; [[and]]

a second component operably connected to said first component, said second component defining a rotational centerline thereof, the rotational centerline of said first component and the rotational centerline of said second component having a first relationship in which the centerlines are coincident and a second relationship in which the centerlines are skewed with respect to each other; and

a securing feature to rigidly attach said first component to said second component.

2. (Original) The reamer of claim 1, further comprising a joint operably connected to said first component and to said second component, said joint adapted to provide the first relationship in which the centerlines are coincident and the second relationship in which the centerlines are skewed with respect to each other.

3. (Original) The reamer of claim 1:

wherein said first component includes a portion thereof having a tapered external periphery; and

wherein said second component includes a portion thereof having a drive connection.

4. (Cancelled)

5. (Currently Amended) The reamer of claim [[4]]1, wherein said securing feature comprises at least one of a wedge and a pin.

6. (Original) The reamer of claim 1, wherein the long bone is one of a femur and a humerus.

7. (Original) The reamer of claim 2, wherein said first component and said second component are hinged to each other.

8. (Original) The reamer of claim 7:  
further comprising a pin; and  
wherein said first component and said second component define openings therein for receiving said pin.

9. (Withdrawn) A reamer assembly for preparing a cavity in the intramedullary canal of a long bone, said reamer comprising:

a first reamer including a first portion for preparation of the cavity in the canal, the first portion defining a rotational centerline thereof, and a second portion operably connected to the first portion, the second portion defining a rotational centerline thereof, the rotational centerline of the first portion and the rotational centerline of the second portion having a first relationship in which the centerlines are coincident and a second relationship in which the centerlines are skewed with respect to each other; and

a second reamer slidably fittable over at least a portion of said first reamer.

10. (Withdrawn) The reamer assembly of claim 9, further comprising a joint operably connected to the first portion and to the second portion, said joint adapted to provide the first relationship in which the centerlines are coincident and the second relationship in which the centerlines are skewed with respect to each other.

11. (Withdrawn) The reamer assembly of claim 9:

wherein said first portion includes a section thereof having a tapered external periphery; and

wherein said second portion includes a section thereof having a drive connection.

12. (Withdrawn) The reamer assembly of claim 9, further including a securing feature to rigidly attach the first portion to the second portion.

13. (Withdrawn) The reamer assembly of claim 12, wherein said securing feature comprises one of a wedge and a pin.

14. (Withdrawn) The reamer assembly of claim 9, wherein the long bone is one of a femur and a humerus.

15. (Withdrawn) The reamer assembly of claim 9, wherein said first portion and said second portion are hinged to each other.

16. (Withdrawn) The reamer of claim 15:  
further comprising a pin; and  
wherein said first portion and said second portion define openings therein for receiving said pin.

17. (Withdrawn) A kit for preparing a cavity in the intramedullary canal of a long bone for use in performing joint arthroplasty, said kit comprising:

a first reamer including a first portion for preparation of the cavity in the canal, the first portion defining a rotational centerline thereof, and a second portion operably connected to the first portion, the second portion defining a rotational centerline thereof, the rotational centerline of the first portion and the rotational centerline of the second portion having a first relationship in which the centerlines are coincident and a second relationship in which the centerlines are skewed with respect to each other; and

a trial for assisting in performing a trial reduction, said trial operably associated with said first reamer.

18. (Withdrawn) The kit of claim 17, further comprising a second reamer slidably fittable over at least a section of the second portion of said first reamer;

19. (Withdrawn) The kit of claim 17, further comprising a joint operably connected to the first portion and to the second portion, said joint adapted to provide the first relationship in which the centerlines are coincident and the second relationship in which the centerlines are skewed with respect to each other.

20. (Withdrawn) The kit of claim 19, further including a securing feature to rigidly attach the first portion to the second portion.

21. (Withdrawn) The kit of claim 20, wherein said securing feature comprises at least one of a wedge and a pin.

22. (Withdrawn) The kit of claim 17, wherein the long bone is one of a femur and a humerus.

23. (Withdrawn) The kit of claim 17, wherein the first portion and the second portion are hinged to each other.

24. (Withdrawn) The kit of claim 23:  
further comprising a pin; and  
wherein said first component and said second component define openings therein for receiving said pin.

25. (Withdrawn) A method for providing joint arthroplasty comprising:  
opening a medullary canal of the long bone;  
providing a reamer including a first member having a first member centerline and a second member having a second member centerline, the first member centerline being

movable with respect to the second member centerline, the first member including a surface for the removal of bone;

positioning the reamer in the canal;

reaming a cavity in the canal with the reamer with the first member centerline being coincident with the second member centerline; and

adjusting the reamer such that the first member centerline is skewed with respect to the second member centerline.

26. (Withdrawn) The method of claim 25 further comprising the steps of:

providing a trial;

attaching the trial to the second member; and

performing a trial reduction.

27. (Withdrawn) The method of claim 25, further comprising the steps of:

providing a second reamer for cooperation with the second member, the second reamer including a surface for the removal of bone; and

removing bone with the second reamer.

28. (Withdrawn) The method of claim 25, further comprising the steps of:

providing a joint prosthesis; and

implanting the joint prosthesis in the cavity

29. (Withdrawn) The method of claim 26:

wherein the reamer step comprises providing a reamer with the first member having a tapered shaft and with the second member having a tapered shaft fitted to the tapered shaft of the first member; and

wherein the providing the trial step comprises providing a trial having tapered shaft fitted to the tapered shaft of the first member.

### REMARKS

The present amendment is being filed under a Certificate of Mailing as indicated. Claims 1-3 and 5-8 are pending. Claim 1 has been amended. Claim 4 has been cancelled. Claims 9-29 have been withdrawn.

#### **Drawings**

Formal drawings have been submitted with this response.

#### **Terminal Disclaimer**

Claim 1 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of copending application No. 11/446484. Assignee of the instant application, DePuy Products, Inc. have enclosed a Terminal Disclaimer, under the provisions of 35 USC 253 and 37 CFR 1.321 and 3.73, the terminal part of any patent granted on application Serial No. 10/606,304 which would extend beyond the expiration date of United States Patent Application No. 11/446,484 and hereby agrees that any patent so granted on application Serial No. 10/606,304 shall be enforceable only for and during such period that the legal title of said patent shall be the same as the legal title to United States Patent Application No. 11/446,484, this agreement to run with any patent granted on application Serial No. 10/606,304 and to be binding upon the grantee, its successors or assigns. The Terminal Disclaimer now recites that DePuy Products, Inc. is the assignee of the present application.

The rejection of Claim 1 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 11 of copending application No. 11/446,484 is now believed to be overcome.

Reconsideration of the rejection under the judicially created doctrine of obviousness-type double patenting to claim 1 as being unpatentable over claim 11 of copending application No. 11/446,484 is respectfully requested.

#### **§102**

Claims 1-8 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,908,423 to Kashuba et al. ("Kashuba"). Independent claim 1 has been amended to include the limitations of claim 4 – specifically, that the reamer includes "a securing feature to rigidly attach said first component to said second component." Kashuba does not disclose such a feature. Kashuba is directed to a reaming system that includes a flexible shaft 12 and



a first reamer 14 and a second reamer 22. Abstract. The first reamer 14 is fixedly attached to the flexible shaft 12 and cannot be skewed from the rotational centerline of the shaft 12. See FIGS. 1 and 3. The second reamer 22 is coupled to the shaft 12 such that the second reamer 22 can bend, as shown in FIGS. 2 and 4. However, there is no disclosure in Kashuba for rigidly attaching the second reamer 22 to the shaft 12. Instead, the second reamer 22 can bend as the flexible shaft 12 bends. There is no rigid attachment. Therefore, for at least this reason, independent claim 1 and its dependents are believed to be allowable.

### **Conclusion**

For the above-described reasons it is respectfully submitted that the rejections to the claims have been overcome and that all remaining claims, namely claims 1-3 and 5-8 are currently in condition for allowance. A Notice of Allowance is respectfully requested.

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Date: October 24, 2006